



6BL7-GTA

# MEDIUM-MU TWIN TRIODE

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## GENERAL DATA

### Electrical:

Heater, for Unipotential Cathodes:

Voltage. . . . . 6.3 . . . . . ac or dc volts

Current. . . . . 1.5 . . . . . amp

Direct Interelectrode Capacitances (Approx.):<sup>o</sup>

	Unit No.1	Unit No.2	
Grid to plate. . . . .	6	6	$\mu\mu\text{f}$
Grid to cathode and heater. . .	4.2	4.6	$\mu\mu\text{f}$
Plate to cathode and heater. . .	0.9	0.9	$\mu\mu\text{f}$

### Characteristics, Class A<sub>1</sub> Amplifier (Each Unit):

Plate Voltage. . . . .	150	250	250	volts
Grid Voltage. . . . .	0	-17	-9	volts
Amplification Factor. . . . .	-	-	15	
Plate Resistance (Approx.) . . . .	-	-	2150	ohms
Transconductance. . . . .	-	-	7000	$\mu\text{mhos}$
Plate Current. . . . .	65*	4	40	ma
Grid Voltage (Approx.) for plate current of 50 $\mu\text{a}$ . . . . .	-	-	-23	volts

### Mechanical:

Operating Position. . . . . Any

Maximum Overall Length. . . . . 3-5/16"

Maximum Seated Length. . . . . 2-3/4"

Maximum Diameter. . . . . 1-9/32"

Dimensional Outline. . . . . See General Section

Bulb. . . . . T9

Base. . . . . Short Intermediate-Shell Octal 8-Pin  
with External Barriers (JETEC No.88-58)

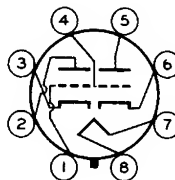
Basing Designation for BOTTOM VIEW. . . . . 88D

Pin 1-Grid of  
Unit No.2

Pin 2-Plate of  
Unit No.2

Pin 3-Cathode of  
Unit No.2

Pin 4-Grid of  
Unit No.1



Pin 5-Plate of  
Unit No.1

Pin 6-Cathode of  
Unit No.1

Pin 7-Heater

Pin 8-Heater

## VERTICAL DEFLECTION OSCILLATOR<sup>♦</sup>

Unless Otherwise Specified, Values are for Each Unit

### Maximum Ratings, Design-Center Values:

For operation in a 525-line, 30-frame system<sup>□</sup>

DC PLATE VOLTAGE. . . . . 500 max. volts

PEAK NEGATIVE-PULSE GRID VOLTAGE. . . . . 400 max. volts

<sup>o</sup>, \*, <sup>♦</sup>, <sup>□</sup>: see next page.

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CATHODE CURRENT:			
Peak . . . . .	210	max.	ma
DC . . . . .	60	max.	ma
PLATE DISSIPATION:			
Either plate . . . . .	10	max.	watts
Both plates (Both units operating) . . .	12	max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode.	200	max.	volts
Heater positive with respect to cathode.	200▲	max.	volts

### Maximum Circuit Values:

Grid-Circuit Resistance. . . . . 4.7 max. megohms

### VERTICAL DEFLECTION AMPLIFIER♦

*Unless Otherwise Specified, Values are for Each Unit*

### Maximum Ratings, Design-Center Values Except as Noted:

*For operation in a 525-line, 30-frame system□*

DC PLATE VOLTAGE . . . . .	500	max.	volts
PEAK POSITIVE-PULSE PLATE VOLTAGE#			
(Absolute maximum) . . . . .	2000■	max.	volts
PEAK NEGATIVE-PULSE GRID VOLTAGE . . . . .	250	max.	volts
CATHODE CURRENT:			
Peak . . . . .	210	max.	ma
DC . . . . .	60	max.	ma
PLATE DISSIPATION:			
Either plate† . . . . .	10	max.	watts
Both plates (Both units operating) . . .	12	max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode.	200	max.	volts
Heater positive with respect to cathode.	200▲	max.	volts

### Maximum Circuit Values:

Grid-Circuit Resistance:  
For Cathode-bias operation†. . . . . 4.7 max. megohms

○ Without external shield.

\* This value can be measured by a method involving a recurrent wave form such that the maximum ratings of the tube will not be exceeded.

♦ When this tube type is operated as a combined vertical deflection oscillator and amplifier, it is recommended that unit No.1 (pins 4, 5, and 6) be used as the oscillator.

□ As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission.

▲ The dc component must not exceed 100 volts.

# This rating is applicable where the duration of the voltage pulse does not exceed 15 per cent of one vertical scanning cycle. In a 525-line, 30-frame system, 15 per cent of one vertical scanning cycle is 2.5 milliseconds.

■ Under no circumstances should this absolute value be exceeded.

† In stages operating with grid-resistor bias, an adequate cathode resistor or other suitable means is required to protect the tube in the absence of excitation.



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AVERAGE PLATE CHARACTERISTICS  
EACH UNIT

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